

The Exchange

NEWS FROM THE FINANCIAL ECONOMICS INSTITUTE AT CLAREMONT MCKENNA COLLEGE

VOLUME 28, WINTER 2019

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Director's Report

by Joshua Rosett



Joshua Rosett

FALL 2019 WAS a banner semester for the FEI in terms of research participation. We had record numbers of RA applications (72) and students working in the Lab (28). We also carried on our

usual activities. We had the application and selection process for the January 12th-16th 2020 New York City Networking Trip. We had an Advisory Board meeting in November and Associates Meeting with a presentation by the Student Investment Fund in October. We prepared for the February 2020 Finance Conference, featuring keynote Speaker David Bloomstran, President of Semper Augustus Investment Group. The next newsletter will include articles on several of these activities.

As I noted in the last couple of reports, a key event for the FEI is our external review. This occurred mainly during 2019, and is just now wrapping up. For this, we produced an internal assessment of the FEI, and then hosted a visit by two finance professors from other schools during November 2019. The external team met with many of our constituents, including students, faculty, staff, administrators, and FEI Board members. They then wrote a report about the FEI based on our report, their visit, and their own research.

As part of our self-assessment, we tabulated statistics on students associated with

our programs going back to the FEI founding 15 years ago. Here are a few of the facts we documented in our internal review document.

- The missions and learning objectives of the FEI and CMC correspond closely. Through our various programs we directly and strongly support all of CMC's learning goals seen here: <https://catalog.claremontmckenna.edu/content.php?catoid=21&navoid=2191#Learning Goals>.
- Overall, we tracked over 700 students who have directly participated in FEI programs over time. Many others likely benefitted in ways we could not track, such as attending FEI sponsored Athenaeum events.
- Since 2005, 242 students have graduated with the Financial Economics Sequence. An additional 86 were Finance BA/MA students. We expect an additional 13 FES and 10 BA/MA students to graduate this Spring.
- The New York City Networking Trip has included 259 students since 2005. We document large numbers of excellent internship and post-graduation job placements over time, and many of these trace back to contacts made during the NYC trip.
- We documented 556 student-semesters of Lab employment during the academic years through Fall 2019, as well as 94 Summer interns over time.

See **Director's Report** on page 5



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Financial Economics Institute

Fall 2019 Student Research Analysts

During the Fall 2019 semester, twenty-eight student Research Analysts were hired to work at the FEI. The following is a list of students, their faculty advisors, and a brief description of the research projects in which they were involved or the type of tutoring they provided:

► **SIMON ALEXANDER '21** (BMGI/Larson Fellow) worked with Professor Janet Smith on a research project analyzing Venture Capital fund performance and trends in reported IRR and TVPI metrics. This project mainly used PitchBook data across hundreds of funds and also looked into discrepancies between General Partner and Limited Partner reporting.

► **ALEXANDER ALSOP '21** is the Bloomberg tutor in the FEI Lab.

► **RAJ BHUTORIA '22** worked with Professor Eric Helland to analyze drug lawsuits and other cases that use multidistrict litigation procedures. He used web-scraping to gather large amounts of data that will be used to provide information on average damages awarded to plaintiffs in these lawsuits.

► **COLEMAN CORNELL '21** (Terri Van Eaton Fellow) worked with Professor Benjamin Gillen on a project regarding subset optimization for portfolio allocation. In particular, this involved applying iterative methods to the existing subset optimization algorithm in order to make the weights of individual securities converge.

► **ANTHONY DERAS '20** worked with Professor Ricardo Fernholz on a commodity trading project, testing different portfolios and allocations to see which strategy would produce the highest risk adjusted return.

► **JOSHUA DORMAN '20** (BMGI/Larson Fellow) is the Capital IQ tutor in the FEI Lab.

► **SOHRAB DUBASH '22** worked with Dr. Stan Oklobdzija analyzing official titles and summaries given to ballot initiatives at the state level for pro or anti-passage bias.

► **AVNIKA GUPTA '22** worked with Professor Angela Vossmeyer to construct a database of roughly 9000 banks which left the banking system in the Great Depression due to failure, distressed mergers, voluntary liquidation, and more. The database aids research on the impact of the resolution of banks on the real economy in pre- and post-FDIC eras.

► **JIALE (JOSEPH) HAN '23** worked with Professor Eric Helland to analyze drug lawsuits and other cases that use multidistrict litigation procedures. He used web-scraping and text analysis to unearth and collate information related to the punitive damages awarded to plaintiffs in these lawsuits.

► **MATTHEW HINES '22** worked with Professor Julio Garin on a project that explores the relationship between climate change and the expansion of large corporations over time, using the ski industry as a case study. In the future, the project will hopefully be expanded to examine industries that are more impactful to a country's overall

economy and GDP, helping to determine how climate change is affecting the macroeconomy.

► **JINYI (GRACE) JIANG '19** worked with Professor Richard C.K. Burdekin for projects on the global financial effect of the 1962 Cuban Missile Crisis, effect of wages on Chinese Basketball Association Player Performance, and default and rescheduling in government debt.

► **VERA KRATZ '21** (Terri Van Eaton Fellow) worked with Professor Julio Garin on the impact of climate change on privatization. By studying ownership in the ski industry and data on weather conditions, the project hopes to find a connection between climate change and the expansion of large corporations over time. If proven successful, the project hopes to expand to other industries as well to show the overall impact of climate change.

► **WILLIAM LI '21** (BMGI/Larson Fellow) worked alongside Professor Eric Hughson to develop the multi-chapter material accompanying Professor Hughson's FIN340 Investments course, a CMC offering that teaches the financial basis of portfolio theory, asset pricing theory, bond pricing, and portfolio performance evaluation.

► **YIPING (SARAH) LU '20** worked with Professor Jessamyn Schaller on an overview of the econometrics of event studies, conducting an extensive review of the use of event studies in economics and finance.

► **ALEXANDER MCKENNA '20** (BMGI/Larson Fellow) is the Excel tutor in the FEI Lab.

► **SAHANA NARAYAN '23** worked with Dr. Stan Oklobdzija on researching bias in official titles and summaries given to ballot initiatives at the California state level. Specifically, this involved coding the initiatives on a series of dimensions to form a quantitative measure of how controversial the ballot measures are.

► **LUKE OSTRANDER '21** worked with Professor Eric Hughson compiling data from the New York Curb Exchange and the Out-of-Town Exchange between 1927 and 1928.

► **KARINA PARK '22** worked with Dr. Stan Oklobdzija to develop a quantitative measure of ballot initiative summary biases. She codes summaries for order bias, word use bias, example bias, extra information bias, and overall bias.

► **GUILLERMO SANTOS '22** worked with Professor Eric Helland analyzing different types of lawsuits that are often involved in multidistrict litigation (MDL) procedures. In partnership with Claremont McKenna's Policy Lab and other students at the FEI, he is organizing and collecting large data sets that will be utilized to calculate the market size of awarded punitive damages involved in MDL lawsuits.

Fall RAs from page 2

► **CHANCE SEARS '21** worked with Professor Fan Yu and Professor George Batta on a literature review of credit default swap contracts. Specifically, this involved transferring data from top financial journal articles concerning CDSs into an excel spreadsheet with the goal of optimizing time during the review process.

► **TANISHA SHETH '20** (BMGI/Larson Fellow) worked with Professor Angela Vossmeyer on a project involving systemic risk and network structure to trace the evolution (destruction and rebuilding) of the banking correspondent network system in 1939 and make comparisons to structures prevalent during the Great Depression period and currently.

► **SETH TAYLOR-BRILL '20** worked with Professor Benjamin Gillen on the testing and implementation of a strategy for building portfolios of securities through subset optimization.

► **DANIEL WANG '22** worked with Professor Andrew Finley on a project related to individual tax avoidance by collecting data to measure variation in political orientation of congressional representatives across states and over time.

► **YANJIN (COSMO) YANG '21** worked with Professor Eric Hughson on his investments textbook, both editing it making it more readable for students in econ 139 and fin 340. His main contribution was in helping to present technical material in a manner most easily comprehended by students in the class.

► **HAOHAN ZHANG '21** worked with Professor Benjamin Gillen on a project that constructs complete subset portfolios using subset optimization. The algorithm is particularly useful in settings with many securities and short return histories and its robust performance against existing asset allocation strategies is proved by simulation and backtest experiments.

► **LANGNING (LORRAINE) ZHAO '21** worked with Professor Angela Vossmeyer on a project involving systemic risk and network structure to trace the evolution (destruction and rebuilding) of the banking correspondent network system between 1929 and 1939.

► **JINGCHENG (ERIC) ZHU '20** worked with Professor Benjamin Gillen on portfolio optimization involving Bayesian estimation methods to estimate moments and generate subset simulations to construct optimized portfolios and conduct comparisons against portfolios under mean-variance framework. ▲



SIMON ALEXANDER '21



ALEXANDER ALSOP '21



RAJ BHUTORIA '22



COLEMAN CORNELL '21



ANTHONY DERAS '20



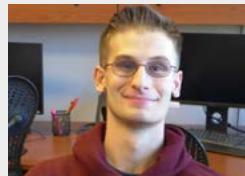
JOSHUA DORMAN '20



AVNIKA GUPTA '22



JIALE (JOSEPH) HAN '23



MATTHEW HINES '22



JINYI (GRACE) JIANG '19



VERA KRATZ '21



WILLIAM LI '21



YIPING (SARAH) LU '20



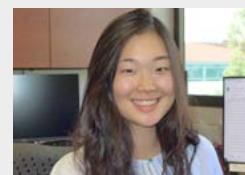
ALEXANDER MCKENNA '20



SAHANA NARAYAN '23



LUKE OSTRANDER '21



KARINA PARK '22



GUILLERMO SANTOS '22



CHANCE SEARS '21



TANISHA SHETH '20



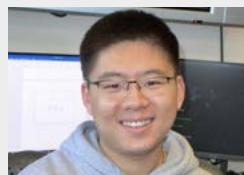
SETH TAYLOR-BRILL '20



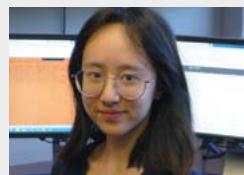
DANIEL WANG '22



YANJIN (COSMO) YANG '21



HAOHAN ZHANG '21



LANGNING (LORRAINE) ZHAO '21



JINGCHENG (ERIC) ZHU '20

Financial Economics Institute

2019 Summer Research Analyst Internship Projects



Left to right back row: Hannah Zhang '22, Jinyi (Grace) Jiang '19, Benjamin Jin '21; Left to right front row: Jingcheng (Eric) Zhu '20, Coleman Cornell '21, Daniel Wang '22, and Rishi Raj Deva '21

COLEMAN CORNELL '21

Faculty Advisor: Professor Benjamin Gillen

Project: Evaluating Performance of Converged Subset Portfolios

- Extended subset optimization algorithm to produce a method for converged subset optimization
- Produced effective out-of-sample subset efficient frontiers describing the mean-variance trade-offs available from converged subset portfolios across different sample sizes
- Used simulation to contrast performance of converged subset portfolios and portfolios generated by the original algorithm

RISHI RAJ DEVA '21

Faculty Advisor: Professor Angela Vossmeyer

Project: Systemic Risk and the Great Depression

- Built the data set comprising the bailout data of over 9,300 banks that were discontinued post the Great Depression
- Statistically merged the bailout data with the bank network data to assess if bailout assistance transmits through the network
- Investigated stress test reports to assess managerial practices during the crises to establish optimal levels of systemic risk

JINYI (GRACE) JIANG '19

Faculty Advisor: Professor Richard Burdekin

Project: Global Financial Effect of 1962 Cuba Crisis; Effect of Wages on Chinese Basketball Association Player Performance

- Collected and organized daily indices of Mexican, US and Canadian markets from 1960 to 1965
- Interpreted the data series by performing correlation and regression analysis, and conducted structural break test
- Searched for previous commentary pieces on Cuban Missile Crisis from Mexican, US and Canadian newspapers in October, 1962

- Collected and compiled datasets for CBA player statistics, CBA team performance, and stock performance of team sponsoring company from season starting in year 2005
- Searched for, summarized and translated some Chinese commentary pieces on ASEAN into English

BENJAMIN JIN '21

Faculty Advisor: Professor Pierangelo De Pace

Project: Tail Behavior of Commodity Price Returns over the Global Business Cycle and US Growing Seasons; Cryptocurrency Bubbles

- Assembled a comprehensive literature review on extreme realizations, volatility, and tail behavior in commodities returns and cryptocurrency markets
- Created and organized data sets tracking US growing seasons for a variety of crops as well as US and Global recessions and expansions
- Simulated commodity price tail returns to determine behavior during recession and expansion periods

DANIEL WANG '22

Faculty Adviser: Professor William Lincoln

Project: Lobbying Expenditures and Firm Value; International Trade and Economic Growth

- Conducted and compiled a comprehensive literature review on the connection between lobbying and firm value
- Assisted in writing and copy editing a proposal for US Census data on how international markets affect firm value

HANNAH ZHANG '22

Faculty Advisor: Professor Angela Vossmeyer

Project: Systemic Risk and the Great Depression

- Built the data set comprising the bailout data of over 9,300 banks that were discontinued post the Great Depression
- Statistically merged the bailout data with the bank network data to assess if bailout assistance transmits through the network
- Investigated stress test reports to assess managerial practices during the crises to establish optimal levels of systemic risk

JINGCHENG (ERIC) ZHU '20

Faculty Adviser: Professor Benjamin Gillen

Project: Bayesian Estimation for portfolio optimization

- Adopted several Bayesian methods to estimate posterior asset moments for portfolio optimization
- Accessed effects of posterior asset moments on portfolio returns under subset optimization and mean-variance optimization
- Analyzed performances of subset optimization relative to mean-variance optimization based on historical market data ▲

CMC's Student Investment Fund

By: Matthew Johnson '20, Chief Executive Officer (2019-2020)

THE STUDENT INVESTMENT FUND kicked off another exciting year by taking on 8 new freshmen and 7 new sophomores in the Fall of 2019. Curiosity and passion were emphasized during this Fall's recruiting process, and as a result our analyst class has been extremely engaged in the new analyst training process, in general fund meetings, and in their industry groups. After focusing on accounting, financial modeling and comparable analysis during the Fall semester, the new analyst training program will evolve after Spring break to host lectures given by outgoing PMs on everything from the efficient market hypothesis to revenue

forecasting to the basics of derivatives. One key element that we have tried to balance over this past year is the level of formality in the fund. While we are a preprofessional organization that inherently has a degree of formality to it, we want to make fund meetings and the SIF community a welcoming and friendly place. Through our now-annual SIF laser tag in the Fall, and our movie night this February where we showed *The Big Short*, efforts continue to ensure SIF strikes the right balance of preprofessional and fun, while maintaining high expectations for our members. As the current exec team plans to pass the torch to

a new team led by Fred Linder '21, we are trying something new: an increased overlap between the new and old leadership teams, so we can ensure a level of continuity as we try to evolve SIF every year to make it better than the last. At its core, SIF thrives on curiosity. We have made a lot of progress on topics big and small, but the overarching objective this past year has been to feed and further the curiosity of our members, from freshmen to seniors, and there is nothing that delights me more as outgoing CEO than to see a multitude of bright, curious and passionate SIF members ready to take the helm for the 2020-2021 academic year. ▲



Student Investment Fund Members

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- Though we were unable to determine the exact numbers based on our historical records, the number of student-faculty semester and Summer pairings on research projects lies somewhere between 702 and 822 over time, accounting for projects involving multiple students and/or faculty.
- Faculty/student research in the Lab has produced over 60 high quality publications of books and peer-reviewed articles over time.
- BMGI has sponsored 85 Fellows over time, and many of these have worked in the Lab.
- The FEI has sponsored many Athenaeum events featuring important speakers, including in recent years Professors Randall

Kroszner and Steven Kaplan, both from the University of Chicago Booth School, Professor N. Gregory Mankiw of Harvard University, and Professor David Yermack of NYU, as well as Minneapolis Fed President Neel Kashkari.

- The FEI has provided several heavily used databases for all CMC students and faculty.

We think the executive summary from the report provided by the external review team best summarizes what the FEI has accomplished over time. They write: "In our experience, we know of no other institute that so deliberately and successfully advances the mission, motto, and learning objectives of its university or college domicile."

Finally, the success of the FEI draws on so many people, and I want to take a moment

to thank at least a few of them. We could not have done any of this without the generous support and oversight from both the Advisory Board and FEI Associates. Many faculty members have taken time to work closely with students in the Lab, providing a great educational experience for them. The RDS and Soll Center have provided great support for many of our programs. The work of my colleague Professor George Batta as Associate Director of the FEI has been indispensable to all we have done over the past few years. BMGI has provided so much financial support, as well as active participation in the BMGI Pitch Competition, BMGI Fellows and the Summer Institute programs. And of course, both Nancy Faust and Terri Van Eaton before her have both done superb jobs with all of our programs. ▲

2019-2020 BMGI/Michael Larson Asset Management Fellows

The BMGI/Michael Larson Asset Management Fellowship Program offers financial support and research experience for juniors and seniors at Claremont McKenna College who are interested in careers involving asset management and investment management. The recipients of this year's scholarships are:



Simon Alexander '21

Simon is a junior at CMC, pursuing a Bachelor's degree in Economics with a Sequence in Financial Economics. In addition to being a BMGI/Michael Larson Asset Management Research Fellow, he is the Chief Technology Officer in the Student Investment Fund

and is a Consultant at the Claremont Consulting Group. Simon also founded a company that develops payment solutions for competitive eSports tournaments, allowing individuals to compete and receive cash payouts on various platforms. In the future, he is interested in developing consumer-oriented Fintech products that help individuals manage their assets and encourage charitable activities. In his free time, Simon enjoys riding horses, producing music, and snowboarding. ▲



Joshua Dorman '20

Josh is a senior at CMC majoring in Economics and History. On campus, he serves as the Chief Investment Officer of the Student Investment Fund and works as a consultant at SOURCE, a student-run consulting organization that helps local nonprofits. Josh had spent the

past few summers working in wealth management, alternative asset investing, and investment banking, and will be joining EY-Parthenon as an Associate Consultant after graduation. In his free time, Josh enjoys Lego building, longboarding, table tennis, and skiing.



William Li '21

William is a junior at CMC from Honolulu, Hawaii, majoring in Mathematics and Economics with a sequence in Computer Science. In addition to being a BMGI/Michael Larson Asset Management Fellow, he is also a Robert Day Scholar,

Portfolio Manager of the Consumer Industry Group for the Student Investment Fund, a Project Leader for the Claremont Consulting Group, a research analyst for the Financial Economics Institute, and the course tutor for ECON154 Financial Statement Analysis. William spent his last two summers interning at Central Capital Ventura, the fintech focused venture fund of Bank Central Asia

(in Jakarta, Indonesia), and at the corporate governance branch of The Bank of New York Mellon (in Boston). Next summer, William will be interning in the investment banking division of Citigroup (in San Francisco), where he will work on transactions across the technology sector. In his free time, he enjoys reading nonfiction books, listening to business related podcasts, and learning about modern world history.



Alexander McKenna '20

Alex is a senior at CMC majoring in Economics with a sequence in Finance. In addition to being a BMGI/Michael Larson Asset Management Fellow, he is a consultant for the Claremont Consulting Group (CCG), a research analyst at the Financial Economics

Institute, and a peer tutor for Econometrics/Accounting. Last summer, he interned at Moelis & Co. in their technology M&A group, and will be joining Morgan Stanley Investment Banking as a full-time analyst after graduation. In his free time, he enjoys fly-fishing, fantasy football, and traveling.



Tanisha Sheth '20

Tanisha is a senior from Mumbai, majoring in Mathematics and Economics with a sequence in Financial Economics. In addition to being a two-time BMGI/Michael Larson Asset Management Fellow, she is also the President of Kinship, a Research Analyst

at the Financial Economics Institute, and an Economics tutor. Tanisha spent her previous summers working as a Financial Analyst at DSP BlackRock and an Equity Research Analyst at Edelweiss Financial Services. She spent her junior summer working at Bank of America Merrill Lynch and will be returning there upon graduation. In her free time, Tanisha enjoys traveling, watching films and showing off her Taekwondo skills. ▲

Fall 2019 Financial Economics Sequence and BA/MA Oral Defense Presentations

THE FINANCIAL ECONOMICS

Sequence and BA/MA in Finance are both parts of the Robert Day School of Economics and Finance at Claremont McKenna College. These curricula are designed for students interested in pursuing careers in the financial sector and/or subsequent graduate education in economics, finance, and related fields.

The Sequence has a rigorous quantitative focus and is designed to complement majors in economics, economics-accounting, and mathematics, as well as dual majors having an economics component. In addition, the Sequence is complementary to the coursework required for the undergraduate Robert Day Scholars Program. Under the auspices of the Financial Economics Institute (FEI), students complete the Sequence, which is noted on the transcript, thereby attesting to their solid understanding of the discipline.

The BA/MA provides additional depth in finance that results in the awarding of the Masters degree as well as the BA after the student completes their four years of study at CMC. After completing prerequisite courses in economics, corporate finance and accounting, students complete 9 units of Masters-level finance along with a seminar in research methods, and they write and defend a finance thesis. Students admitted to the BA/MA program are Robert Day Scholars.

The following is a list of the students who passed their presentations this fall along with the titles of their senior theses and the Abstracts of their theses:

WILLIAM BUCKSTAFF, FES

Viral Businesses and Initial IPO Returns

"This study examines the effect that emphasizing company growth instead of revenue has on first day and first month initial public offering (IPO) returns for venture-capital backed companies. I define this growth oriented business model as viral. There has been increasing market consolidation with tech firms that experience high network effects and are more viral,

so I hypothesized that new entrants to this space would be treated with more scrutiny and have lower IPO returns. Virality is defined as the amount of a company's market share and revenue that can be explained by achieving significant network effects. I measure virality by assessing the amount of emphasis companies place on growth as opposed to revenue and profitability. This was done by examining consistent elements throughout my sample companies' IPO prospectuses to gauge the network effect they were seeking to achieve. My findings yielded significant results contradictory to my hypothesis: companies that are more viral have higher first day returns than their non-viral counterparts."

DYLAN BYRD, BA/MA

It's All Downhill from Here: Evidence supporting downward sloping demand curves for stocks near the Russell 1000/2000 cut-off

"Now that U.S. equity investments allocated towards tracking indexes have surpassed that of active managers, discussions regarding the implications of passive investments on financial markets have intensified. Using the passive ownership discontinuity of the Russell 1000 and Russell 2000 Indices to isolate the effects of passive ownership on stock prices, this paper answers whether or not the evidence of downward sloping demand curves found in prior literature still exists in more recent samples. As the first to apply the two-stage least squares (2SLS) methodology of Appel, Gormley, and Keim (2018) to predict abnormal returns adjacent to the Russell reconstitution event, my results suggest that the percent of a firm's stock owned by passive investors is positively correlated with abnormal returns surrounding the annual reconstitution. Additionally, I find evidence that abnormal returns persist over multiple months post-reconstitution. The lack of significant abnormal returns found three months after reconstitution supports the claim that price effects are due to forced buying related to index matching."

CONNOR GASKIN, FES

How Announcements of the Qualified Mortgage Patch Expiration Have Impacted the United States Housing Market

"This study analyzes the impacts of different announcements of the Qualified Mortgage GSE Patch expiration, set for January 10, 2021. The Qualified Mortgage GSE Patch was introduced in January 2014 to allow for the GSEs, Freddie Mac and Fannie Mae, to originate loans above the monthly Debt-to-Income ratio of 43 percent with the same protections as a Qualified Mortgage. To analyze these impacts, I measure the changes in the number of loans the GSEs obtain and weighted average home price before the announcement to after the announcement. In order to test for significance, I use a five-year benchmark period to compare against these announcement periods, conducting Student t-tests and difference in differences tests. The results of this study show that there were some significant positive changes in home price after an announcement period; however, there were no significant positive changes in the number of GSE loans. The results highlight that although both loan count and home prices were increasing in the announcement periods, there is a lack of significance in the short-term announcement periods."

JUSTIN HULL, FES

Strategies for the Modern Investor: Evaluating Stock Recommendations from CNBC's Fast Money

"This paper applies a short run event study methodology and a long run buy and hold methodology to test the performance of stock recommendations made on the CNBC show Fast Money. For both tests, I compare realized returns of sample recommendations to a benchmark meant to estimate expected returns. The results suggest that buy recommendations generate significant abnormal returns the day following the show, but holding a portfolio of these buy

Oral Defense Presentations from page 7

recommendations over the duration of a year does not provide significant abnormal returns. Clear winners and losers emerge when the recommendations of individual panelists are put to the test."

NICHOLAS JOHNSON, BA/MA***Does Complexity Pay? A Study on the Effectiveness of Various Forms of Regression at Fundamental Analysis***

"To assess whether or not fundamental analysis can be improved with more advanced, non-linear statistical techniques like neural networks over linear techniques like lasso and least squares, I construct estimates of market capitalization utilizing the different methodologies proposed and utilize their deviation from actual market values to construct portfolios which I test for significance. Where several different neural-network derived portfolios were able to generate statistically significant risk-adjusted returns, least squares and lasso regression were not under any scenario. This leads me to the conclusion that neural networks are in fact a superior means of conducting fundamental analysis and that the relationship between fundamental values and a firm's subsequent returns is complex and best explained by a model which is capable of modeling these non-linear relationships."

KONNOR KWOK, FES***Heat Seeking" The Truth: An Analysis of the "Heat Seeker" Trading Algorithm***

"The aim of this study is to analyze the validity of the "Heat Seeker" trading algorithm developed by Jon and Pete Najarian. In order to evaluate the validity of this algorithm, I conducted an event study to analyze abnormal returns. This study is based on firms designated by the Najarian brother's algorithm for having unusual option activity versus a control group of comparable firms that did not exhibit unusual option activity in the same time period. Essentially the trading strategy of the Najarian brother's is to purchase the option designated by the algorithm and resell the contracts after achieving gains in the contracts premium. In order to emulate this strategy, I analyze abnormal returns

generated by both the experimental and control group. In the regression analysis, abnormal returns are benchmarked using the Fama-French 3 Factor Risk Model due to its ability to explain nearly 90% of diversified portfolio returns by controlling for the broad market, small stocks, and value stocks. The results of this study indicate that the "Heat Seeker" algorithm's designated firm choices yield abnormal returns of 2.362% which are significant at the 1% level, while the control group generated insignificant 0.6168% abnormal returns at the end of the 10 day event window. To analyze whether the gains were temporary, the study was also conducted at the 20 and 30 day event windows. Abnormal returns decreased for unusual option activity firms to 1.96% while still remaining statistically significant. At the 30 day event window these returns again decreased to 1.74% but again remained significant. The control group also continued to decrease while remaining insignificant over the 20 and 30 days. These results indicate there is a profitable trading strategy, even at the 1.5 month mark after posting, by purchasing the underlying asset of firms flagged for having unusual option activity by the "Heat Seeker" algorithm. The most profitable time period is at the 10 day event window."

CONNOR LEHNER, FES***Do Divested Assets Outperform Full-Scale Acquisitions in the Short-Run?***

"This study compared the returns to acquirers from purchasing divested assets and full-scale acquisitions. Merging acquisition details with CRSP stock data and Compustat balance sheet information, I find that divested assets are positively associated with 3-day abnormal cumulative returns but is insignificant. My results are clustered to year in order to explain any correlations across years that could affect 3-day cumulative abnormal returns. This study contributes to the interaction between asset fit and divested assets by finding an opposite effect than past studies."

AUSTIN LONG, BA/MA***Property-type diversification effects on equity REIT firm value***

"This paper estimates the effect of

property-type diversification in equity real estate investment trusts (REITs) from 1999 to 2018, by imputing stand-alone values for individual property-types and comparing the sum of these stand-alone values to the firm's actual value. This study is motivated by the desire to determine if REITs should undertake property-type diversification and if the diversification discount found in corporate finance literature extends to real estate. Previous literature has analyzed property-type diversification effects on REIT performance. However, as far as I am aware, this paper is the first to look at firm value and property-type diversification in REITs. I find REITs who operate in multiple property classes do not have significantly more debt than their specialized counterparts, suggesting no increase in debt capacity from diversification. Contrary to the diversification discount found by Berger and Ofek (1995), I find an implied average value gain from diversification of 12% to 20%. The estimated value gain from diversification increases as the number of property-types of a REIT increases. My results are sensitive to the inclusion of extreme excess value measures."

PHOEBE MADSEN, BA/MA***The Leverage Effect In Mergers And Acquisitions: How The Level And Type Of Leverage Affects M&A Success***

"This thesis examines the effect that pre-transaction leverage has on the success of mergers and acquisitions, by studying the level and type of leverage possessed by the acquiring firm in order to test whether debt is truly disciplining. Success is defined as both the 3-day announcement period stock price return, and the persistence of returns over the announcement period and the year following announcement. Past literature examines how the pre-transaction leverage affects the 3-day stock price return of the acquiring firm for transactions from 1960 to 1980. This thesis first updates the data and studies transactions from 1980 to 2018. Secondly, this thesis adds the methodology of measuring success by the persistence of returns. Finally, this paper examines the difference in disciplining value between

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junior and senior secured debt by studying how the level of senior secured debt in the acquirer's capital structure affects M&A success. This thesis uses data from Capital IQ and both a simple leverage and ordered probit model in order to carry out the analysis. My findings suggest that debt has a statistically significant effect on the success of M&A transactions indicating that debt is truly disciplining. Lastly, I find a statistically significant difference in disciplining value between junior and senior secured debt."

CHARLES MANGUM, FES**"It's Gonna be Yuge": The Impact of Chinese Imports on United States Manufacturing Firm Valuations**

"Throughout the years there has been literature regarding the impacts of Chinese manufacturing on the United States economy. Much of the focus has been centered on macro-economic effects and not firm level impacts. Using trade exposure and data from publically traded manufacturing firms I provide an analysis of the potential effects of increased trade exposure in a highly competitive market. My research aims to measure the impacts of Chinese imports on United States manufacturing companies with low technological barriers to entry. When comparing trade exposure to firm level data I conclude that there is a negative correlation between investment levels and import exposure, but no correlation between imports and firm valuations. My research under no circumstances can imply causation, but it finds areas of correlation that can be used as a foundation for further research."

NICHOLAS PIBL, FES**Measuring a Successful Marriage: The Impact of Target Company ESG scores on the Merger Arbitrage Spread**

"The inclusion of ESG scores in the M&A due diligence process has given rise to empirical research on the relationship between ESG scores and percent premiums, realizable synergies, and post-merger success. However, little literature around ESG scores and the merger arbitrage spread exists, especially literature on

target companies. Considering that target companies with higher ESG scores tend to have more transparency during the due diligence process and integrate with more ease, investors may have less uncertainty about the deal due to more accurate valuations and a higher potential for integration success. For this reason, there may be an empirical relationship between ESG scores and arbitrage spread. The study analyzes the impact of a target company's ESG score on the merger arbitrage spread one day after the merger announcement, while controlling for company and deal characteristics between 2002 and 2019. This paper finds a negative and statistically significant relationship between target company ESG score and the merger arbitrage spread."

JAMES PLUNK, BA/MA**The Information in Levering Up: An Analysis of Market Reactions to Leverage Changes in Biotech**

"This paper explores how equity market reactions to the issuance of debt by biotechnology firms differ from other industries, due to informational content differences. It uses data from January 1st of 2000 to November 1st of 2019, consisting of 132 observations. Employing event study methodology, this paper examines 3-day cumulative abnormal returns centered on the date of debt announcements in order to determine whether biotechnology companies' announcements consistently contain more positive information. It compares the CAR's of biotechnology to advertising and marketing in order to isolate the key differences. This study finds no support for the hypothesis that the CAR's will be consistently greater for biotech firms. It does find significant differences between the two industries returns when the debt proceeds are used for refinancing, indicating that informational differences exist, which could be an area of future research." ▲

SPRING EVENTS

New York City Networking Trip January 12–16, 2020

Eighteen CMC students visited prestigious firms in NYC to gain exposure to various job opportunities in the financial markets and to establish relationships with CMC alumni working at these companies. The goal is for these relationships to evolve into summer internship and full-time job opportunities for student attendees. In addition to the company visits, the trip included various evening events with financial services professionals and CMC alumni. Visits this year included Deutsche Bank, Jane Street, Goldman Sachs, BDT Capital, Atalaya, Moelis & Company, Cain Brothers, The D.E. Shaw Group, Perella Weinberg Partners, Kohlberg Kravis Roberts & Co., Rothschild & Co., Chainalysis, Federal Reserve Bank, Evercore, and Morgan Stanley. The trip is sponsored by the Financial Economics Institute and Robert Day Scholars Program.

Claremont Finance Conference February 14, 2020

The Executive Committee of the Student Investment Fund of CMC coordinated and hosted the annual finance conference, including an afternoon panel discussion, followed by a guest speaker at the Marian Miner Cook Athenaeum that evening.



FINANCIAL ECONOMICS
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The mission of the Financial Economics Institute is to provide unique research, curricular and extracurricular opportunities engaging the Claremont Colleges in both the theory and practice of financial economics. The FEI administers three programs directed at these objectives. First, the FEI supports collaborative, advanced student/faculty research in financial economics and overlapping disciplines. Second, the FEI oversees the Financial Economics Sequence, a unique curriculum grounded on rigorous quantitative courses in a liberal arts context, preparing students for career opportunities in finance. Third, the FEI sponsors activities for the broader community, including oversight of the Student Investment Fund, provision of databases, space and hardware for multiple purposes, and support for conferences, workshops, internships, networking trips and other events.